

TYPE OF BEDDING (LONG VS CHOPPED STRAW) AND ITS IMPACT ON THE CONSUMPTION AND GROWTH OF FATTENING CALVES IN THE INTENSIVE SYSTEM



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INTRODUCTION AND OBJECTIVES:

In bedding, space and its quality is a limiting resource. Calves in intensive fattening systems need enough space to rest and they have to be comfortable. If the calves are lying down, there is less interaction with other animals and this will cause less aggression or fights, sexual behaviors, stereotypes, etc. The fact that they spend more time lying down also helps the animal's welfare and rumination, since it produces a similar effect to sleep and is related to the health of the rumen and productive performances.

The objective of this study was to evaluate the effects of cleaning frequency (once a week vs once every 2 weeks) and straw bedding length (long vs chopped) on the animal behavior, and animal and pen cleanliness, the concentrate and straw consumption and his performance (daily gain, feed efficiency, etc.).

MATERIAL AND METRHODS:

- 20 Holstein bulls of 422 Kg of BW and 292 days of age.
- Allocated in individual pens (2,90 x 1,97 x 1,4 meters).
- Exposed to a 2 × 2 factorial design (cleaning frequency and straw bedding length). (Table 1)
- Dairy controls of concentrate and straw consumption.
- Weekly control of bed and animal cleanliness and animal behavior (15 min during 1 hour).
- Every 2 weeks weight animal control.

RESULTS:

- Concentrate (8.9 ± 0.37 kg/d) and straw intake (0.9 ± 0.13 kg/d) did not differ among treatments.
- ADG and efficiency were lesser when bulls were in S-2 (1.38 ± 0.095 kg/d and 0.14 ± 0.007 kg/kg, respectively) compared with the other treatments (1.66 ± 0.095 kg/d and 0.17 ± 0.007 kg/kg, respectively). (Figure 1)
- Animals bedded in S-2 were more time standing ($2,16$ vs $1,68 \pm 0,141$ times every 15 min), the ruminating decreased (2.53 vs 2.10 ± 0.067 times every 15 min), and selfgrooming increased (0.84 vs 1.59 ± 0.067 times every 15 min) and stereotypes tended to increase (0.09 vs 0.23 ± 0.020 times every 15 min). (Figure 2)
- Animals bedded in S-2 were dirtier (22,5% of animal cleanliness score of “4”), followed by the animals bedded with P-2 (20% of animal cleanliness score of “3”), bedded in S-1 (77.5% of animal cleanliness score of “2”) and the cleanest and bulls were the bedded in P-1 (50% of animal cleanliness score of “1”). (Figure 3)

CONCLUSIONS:

- The type of bedding can affect the ADG, the efficiency, behavior and animal welfare.
- Bedding the animals in long straw and cleaning them once every 2 weeks impairs performance, animal welfare (rumination, stereotypes) and cleanliness of the animal and the pen.

REFERENCES:

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Elmore MRP, Elischer MF, Claeyes MC, Pajor EA. 2015. The effects of different flooring types on the behavior, health, and welfare of finishing beef steers. J. Anim. Sci. 93:1258–1266. Keane MP, McGee M, O’Riordan EG, Kelly AK, Earley B. 2017 Jun 21. Effect of space allowance and floor type on performance, welfare and physiological measurements of finishing beef heifers. animal:1–10.

Clean- ing frequency	Straw type	
	Long straw	Chopped Straw
Once a week	S-1	P-1
Every 2 weeks	S-2	P-2

Table 1: Experimental treatments for the study.

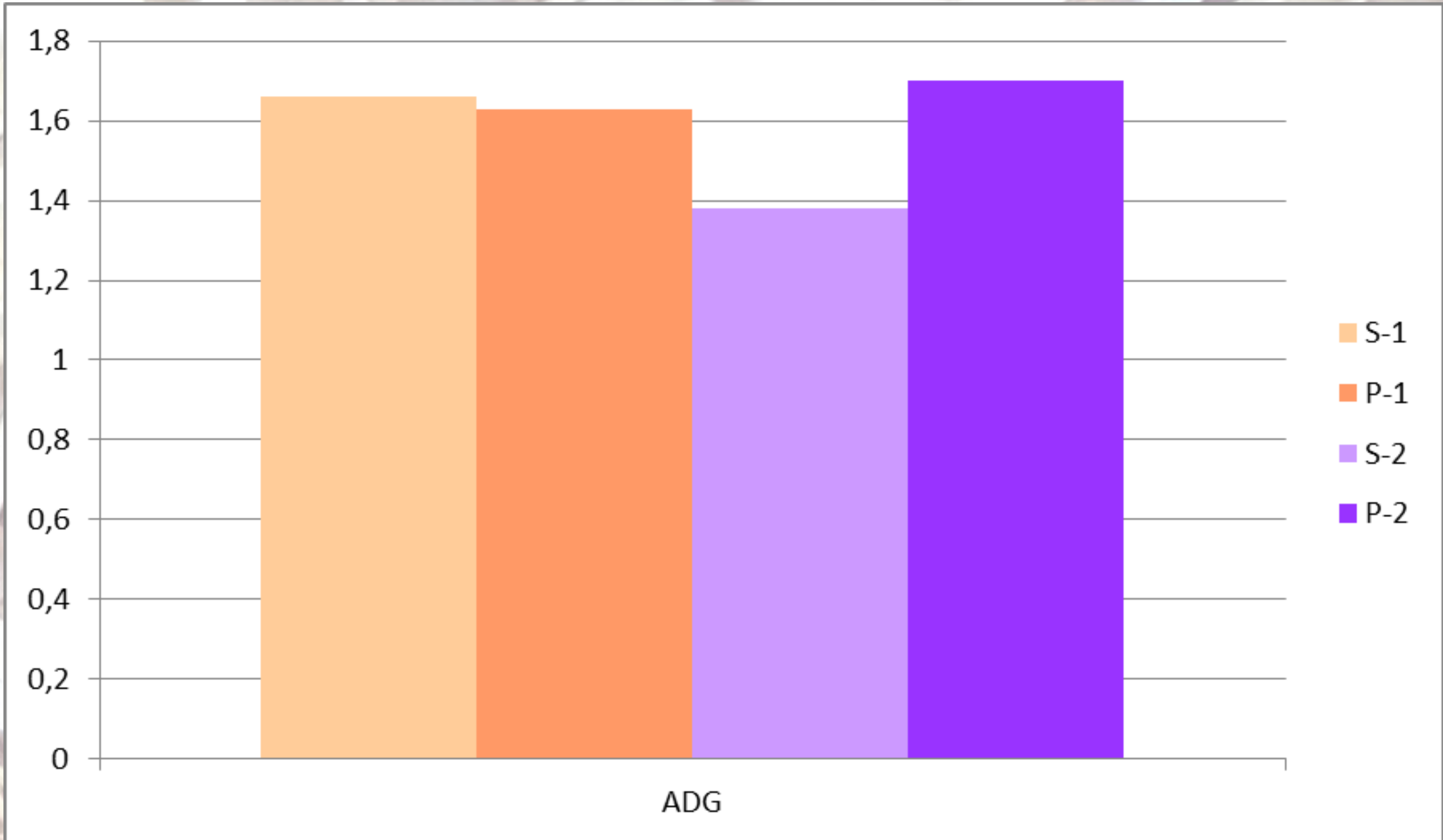


Figure 1: Difference in ADG.

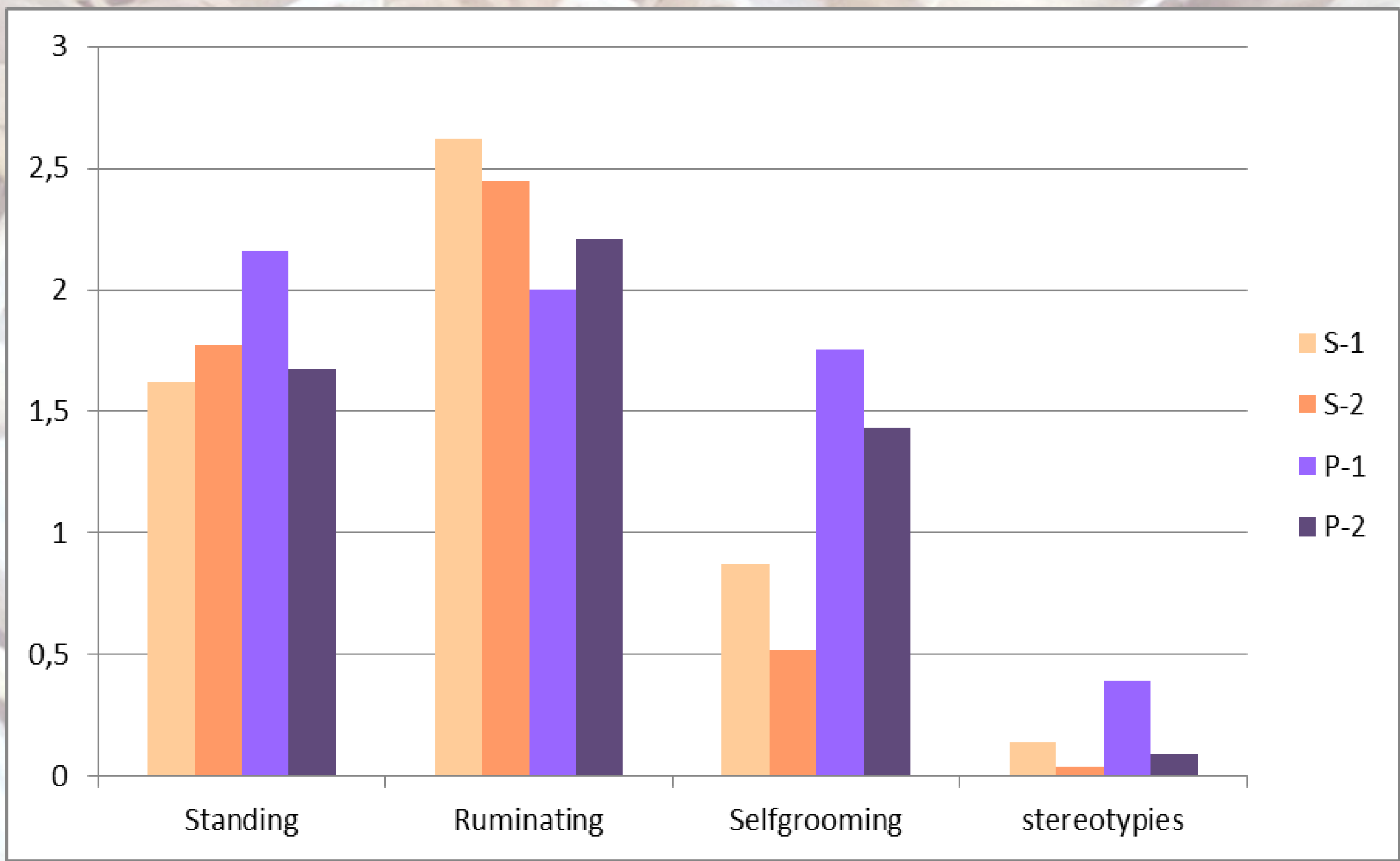


Figure 2: Difference in animal behavior.

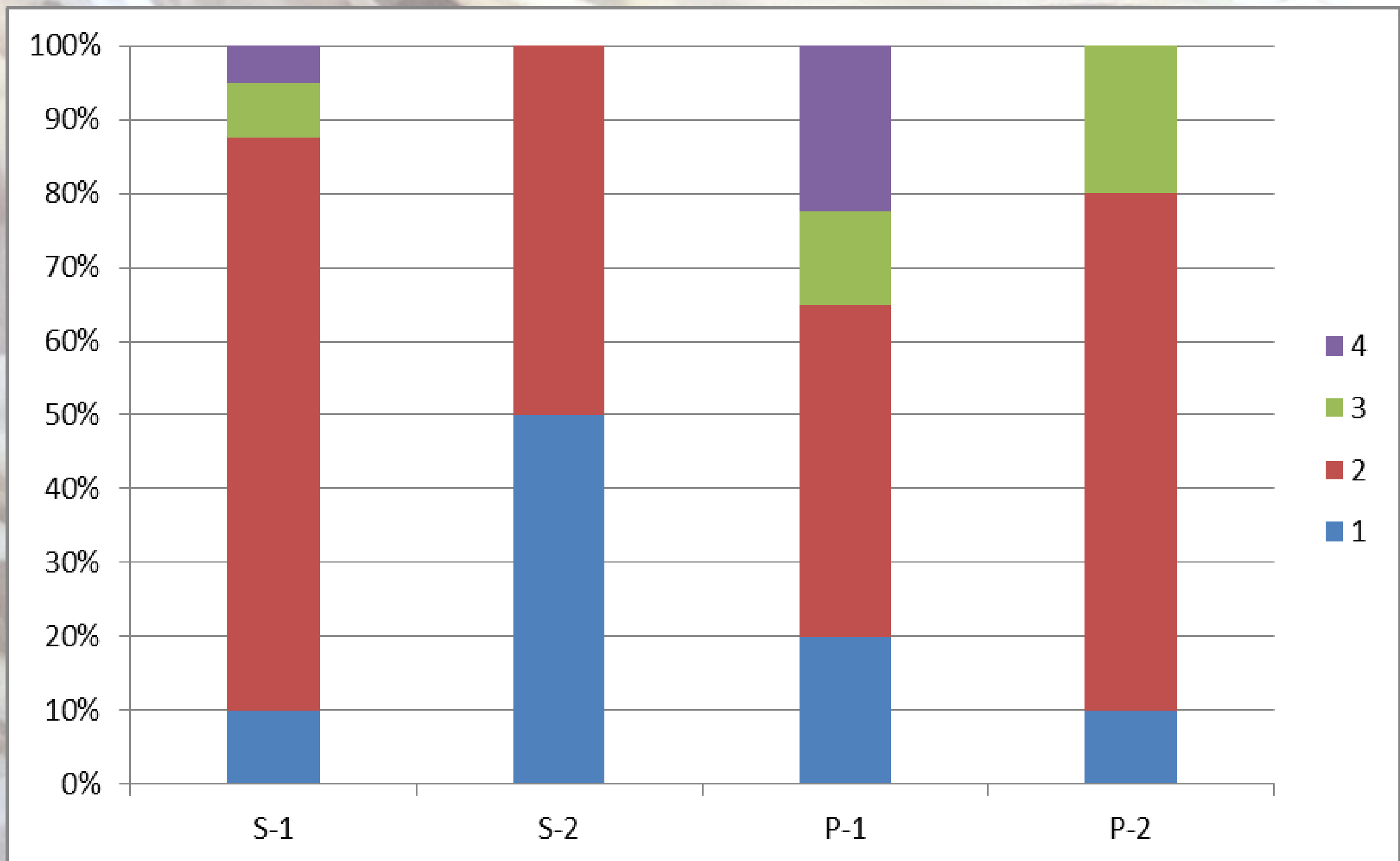


Figure 3: Difference in animal cleanliness.

(1: < 10% del cos cobert de brutícia; 2: 10-25% del cos cobert de brutícia, 3: 25-50% del cos cobert de brutícia, 4: 50-75% del cos cobert de brutícia; 5: >75% del cos cobert de brutícia).